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Medical Imagery

Cystic lung lesions revealing a *Pneumocystis jirovecii* and *Aspergillus flavus* co-infection in an HIV-infected patient

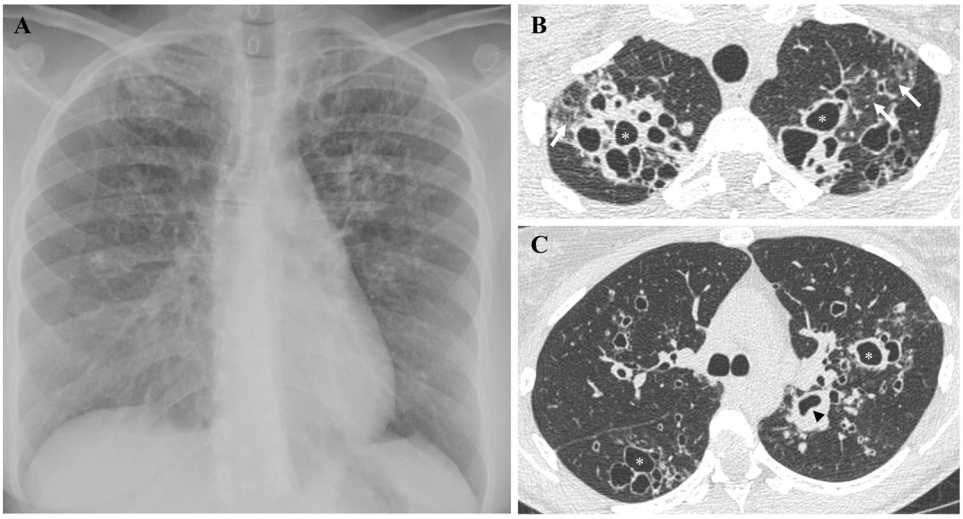

Figure 1. Chest X-ray showing diffuse alveolo-interstitial infiltrates (A), and computed tomography (B and C) showing diffuse cystic lesions (asterisks) surrounded by ground-glass opacities (arrow), and sometimes with thicker walls, mimicking an 'air crescent sign' (arrowhead).

An untreated, HIV-infected, 39-year-old woman presented with a dry cough of 1-month duration. The physical examination was normal. A chest X-ray showed diffuse alveolo-interstitial infiltrates predominantly in the lung apex (Figure 1A). A computed tomography (CT) scan disclosed diffuse cystic lesions surrounded by ground-glass opacities (Figure 1B, C). Some cavitary lesions presented thicker walls, mimicking an 'air crescent sign'. The patient's CD4 count was 83 cells/μl and HIV viral load was 501 180 copies/ml. Bronchoalveolar lavage (BAL) fluid examination revealed 360 000 cells/ml, including macrophages (66%), neutrophils (32%), and eosinophils (2%), with foamy exudates suggestive of Pneumocystis pneumonia (PCP). Mycological findings confirmed *Pneumocystis jirovecii* cysts and trophic forms, associated with filamentous elements with culture of *Aspergillus flavus*. Galactomannan antigen was detected in serum and BAL fluid. Of note, there was no additional predisposing factor for invasive aspergillosis, in particular no neutropenia or corticosteroid therapy.[1] Co-trimoxazole was administrated at a curative dose for 21 days, followed by secondary prophylaxis. Highly-active antiretroviral therapy was started 10 days later. The probable pulmonary invasive aspergillosis was treated with voriconazole for 3 months. The patient's clinical condition improved rapidly. Follow-up CT showed progression towards nodular non-cavitary lesions at 6 weeks, and normalized at 3 months.

Cystic PCP is an unrecognized condition, although involving more than 30% of patients in some series.[2,3] These excavations may enhance the risk of Aspergillus co-infection, rarely described in HIV-infected patients.[1,4,5]

Ethical approval: Not required.

Conflict of interest: No conflict of interest to declare.

References

1. Lortholary O, Meyohas MC, Dupont B, Cadranel J, Salmon-Ceron D, Peyramond D, et al. Invasive aspergillosis in patients with acquired immunodeficiency syndrome: report of 33 cases. French Cooperative Study Group on Aspergillosis in AIDS. *Am J Med* 1993;**95**:177–87.
2. Kuhlman JE, Kavuru M, Fishman EK, Siegelman SS. *Pneumocystis carinii* pneumonia: spectrum of parenchymal CT findings. *Radiology* 1990;**175**:711–4.
3. Chow C, Templeton PA, White CS. Lung cysts associated with *Pneumocystis carinii* pneumonia: radiographic characteristics, natural history, and complications. *Am J Roentgenol* 1993;**161**:527–31.
4. Ponces Bento D, Esteves F, Matos O, Miranda AC, Ventura F, Araújo C, et al. Unusual coexistence of opportunistic lung infections in a human immunodeficiency virus positive patient suffering from persistent *Pneumocystis jirovecii* pneumonia: a case report. *Rev Port Pneumol* 2013;**19**:129–33.

http://dx.doi.org/10.1016/j.ijid.2015.06.021

5. Shankar EM, Kumarasamy N, Rajan R, Balakrishnan P, Solomon S, Devaleenol B, et al. *Aspergillus fumigatus*, *Pneumocystis jiroveci*, *Klebsiella pneumoniae* and *Mycoplasma fermentans* co-infection in a HIV infected patient with respiratory conditions from southern India. *Indian J Med Res* 2006;**123**:181–4.

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